DOCUMENT RESUME

ED 160 130 IR 006 639

AUTHOR	Auster, Ethel
TITLE	The Development, Implementation and Evaluation of a Training Program for Educational Information Consultants.
SPONS AGENCY	Ontario Dept. of Education, Toronto.
REPORT NO	ON-01155
PUB DATE	Mar 78
NOTE	35p.; Paper presented at the Annual Meeting of the American Educational Research Association (Toronto, Canada, March 27-31, 1978)
EDRS PRICE	MF-$0.83 HC-$2.06 Plus Postage.
DESCRIPTORS	Change Agents; *Consultants; Development; Evaluation; *Information Services; Interviews; *On Line Systems; Questionnaires; Staff Role; Tables (Data); *Training
IDENTIFIERS	*Educational Information; *Linking Agents

ABSTRACT

The initial training course and evaluation procedures are described as well as the roles and functions of Educational Information Consultants in interacting with users in clarification of search scope and interpretation of output from the existing online social science data bases in a remote northern section of Ontario. Their role in assisting local educators in formulating information problems and supplying them with further assistance was developed as part of a research project to establish an interactive, online bibliographic search service for Ontario educators. Data presented on the retention of training information and the degree to which the Educational Information Consultants internalized their roles were collected by questionnaires and interviews. A bibliography and a copy of the evaluation questionnaire are appended. (Author/MBB)

****
* Reproductions supplied by EDRS are the best that can be made *
* from the original document. *
****

ED160130

U S DEPARTMENT OF HEALTH,
EDUCATION & WELFARE
NATIONAL INSTITUTE OF
EDUCATION

THIS DOCUMENT HAS BEEN REPRODUCED EXACTLY AS RECEIVED FROM THE PERSON OR ORGANIZATION ORIGINATING IT. POINTS OF VIEW OR OPINIONS STATED DO NOT NECESSARILY REPRESENT OFFICIAL NATIONAL INSTITUTE OF EDUCATION POSITION OR POLICY

ON 01155

The Development, Implementation, and Evaluation of a Training Program for Educational Information Consultants*

BEST COPY AVAILABLE

Ethel Auster
The Ontario Institute for Studies in Education

"PERMISSION TO REPRODUCE THIS MATERIAL HAS BEEN GRANTED BY

Barbara Beardsley

TO THE EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC) AND USERS OF THE ERIC SYSTEM."

Paper presented at the Annual Meeting of the American Educational Research Association held March 27-31, 1978, Toronto, Canada

Session # 25.26

*RESEARCH PROJECT FUNDED UNDER CONTRACT BY THE MINISTRY OF EDUCATION, ONTARIO

IR006639

MEM

ONTERIS ABSTRACT

ON 01155

Auster, Ethel. -- The Development, Implementation, and Evaluation of a Training Program for Educational Information Consultants. -- Toronto : The Ontario Institute for Studies in Education, 1978. -- 30 p. -- (Ministry of Education, Ontario. Contractual Research)

Type of Study:

Descriptive

Sample:

3 Educational Information Consultants (EICs) from the North Eastern Region: an Education Officer at the Regional Office of the Ministry of Education (E1); the chief librarian of a Community College-Faculty of Education (E2); and the Ontario Institute for Studies in Education (OISE) faculty member attached to the local field centre (E3). Data collected November 1975.

Methodology:

Following selection of the 17-board North Eastern Region as the target area for data collection on the effectiveness of EICs, the role of the EIC was clearly defined and an initial training program developed. The 1-day training course was implemented at OISE; an evaluation questionnaire was administered to the 3 EICs a few months later. Further data were collected 1 week later in on-site interivews. Data included factual course information and intuitive information on the degree of role internalization by the EIC.

Findings:

1. EICs felt the course was effective overall, but felt there was a lack of time, especially in working out search strategy, and that the explanation of information components lacked clarity and specificity, only dealing clearly with the purposes and services of EISO.
2. In helping the EIC to learn his role, previous field experience was most important, followed by the training session, and trial and error in dealing with clients.
3. E1 knew the specific information from the training session, saw his role as passive, held no information sessions, made no use of display materials, and had only limited internalization of his new role.
4. E2 set up information centres and aimed to use the system as part of his job functions of helping graduate students and boards and aiding information dissemination.
5. E3 stimulated interest in search facilities, seeing his role as an information purveyor; he also aided problem clarification, choice of descriptors and use of bibliographies.

Conclusions:

1. The normal role of the EIC strongly affects his functioning as an EIC; the EIC concept is adapted to fit specific needs and positions.
2. Vital EIC characteristics are training, interpersonal skills, established relationships with colleagues, intelligence, tact, persistence, enthusiasm, and imagination.
3. The training program should have longer, more detailed

Conclusions...

sessions with more emphasis on search strategy, technical aspects of information retrieval, use of ERIC indexes, interpretation of bibliographies, and document ordering procedures.

4. Trainees should be selected after consideration of their current positions, training and experience; emergent roles of EICs would be valuable examples in the training program.
5. Present EICs would benefit from an exchange of experiences, more feedback from project staff, and more "public relations" type material.

Special Features:

1. Bibliography -- 22 items
2. Training program contents

Tests or Instruments Included in Document:

Self-made questionnaire

ABSTRACT SUBMITTED TO ERIC

DOCUMENT RESUME

AUTHOR	Auster, Ethel
TITLE	The Development, Implementation, and Evaluation of a Training Program for Educational Information Consultants
REPORT NO.	ON 01155
PUB DATE	1978
NOTE	30 p.

ABSTRACT

The report describes the training and use of Educational Information Consultants (EICs) as change agents in a remote northern setting. The EICs' role in assisting local educators in formulating their information problems and supplying them with further assistance was developed as part of a research project to establish an interactive, on-line bibliographic search service for Ontario educators. The initial training course and evaluation procedures are described. Also presented are data collected by questionnaires and interviews on the retention of course information and the degree to which the EICs internalized their new roles.

CONTENTS

Introduction 1

Initial Training 5

Evaluation of Initial Train ng Program 6
- The Questionnaire
- The Interviews
- Recommendations

Follow-up Training 19

Bibliography 21

Appendices
- A. Training Session #1 for EICs
- B. Evaluation of Training Session for EICs
- C. Training Session #2 for EICs

THE DEVELOPMENT, IMPLEMENTATION, AND EVALUATION OF A TRAINING PROGRAM FOR EDUCATIONAL INFORMATION CONSULTANTS

Introduction

Early in 1975, the Ontario Ministry of Education contracted with The Ontario Institute for Studies in Education to investigate the demand, the technical requirements, the use, and the fiscal viability of offering an interactive on-line bibliographic search service to the educators of this province by providing access to the existing social science data bases. This contracted research project was known as the Educational Information System for Ontario (EISO) and one of the specifications of the contract was to "study the effectiveness of an intermediary (consultant) in interacting with users in a remote geographic setting in northern Ontario in clarification of search scope and in interpretation of output" and to "develop and refine strategies of utilizing such services through existing remote service facilities, such as a field office of OISE, a regional office of the Ministry of Education, and an office of a school board".

The concept of change agents is of course not a new one but derives from the use of agricultural extension agents in the U.S. at the beginning of this century. Nor is the use of change agents in education a recent development. However, the use of intermediaries with specific functions with regard to information purveyance is a direct result of the increasing rate of information production combined with the recent invention of computer technology to handle it.

It has by now become commonplace to refer to the "information explosion" in all fields of knowledge. We are told that knowledge is

doubling every ten years and is likely to continue to grow at an increasingly faster rate. Information specialists have been aware of the problem for some time and in the last two decades have attempted to find new ways of controlling and making available vast quantities of materials to specialists in various subject areas. Although sophisticated technological advances in information retrieval were first applied to the areas of medicine, chemistry, physics, and engineering, they are now also available for use in education and psychology. Ironically, however, the increase in the amount of information available and the creation of new methods for handling it have not made the life of the average educator easier but have, on the contrary, served to increase the "knowledge gap". While it may no longer take decades for a new educational practice to be widely adopted in the schools as it did when Mort made his famous studies, we have little evidence to show that the findings of educational research are having a significant impact in the classroom.

Those who have devoted serious study to the problem, Sieber (1972) at Columbia, Havelock (1973) at Michigan, and Hood at the Far West Laboratory, have all pointed to the lack of training the average educator, be he teacher or administrator, has in being able to identify sources of information in a systematic way: he does not know what bibliographic tools are available, which are most likely to be useful to him, where they are located, how to get them, or how to use them. Further, he is unable to translate what he does find and apply it to his own classroom or school. Often, he is even unable to articulate his problem in such a way as to be able to find help in solving it. Linkage agents, then, were needed to help bridge the gap between the research and the classroom.

These people would ideally be people knowledgeable about available resources, familiar with the needs of local educators, and skilled in facilitating the introduction of new practices into the school setting. Although, as both Havelock and Sieber realized, persons with such an array of skills are still rare, the Province of Ontario is particularly fortunate in that various mechanisms and organizations are already in existence whose function it is to help local educators in various ways. Examples of such agencies are the Regional Offices of the Ministry of Education and the Field Centres of OISE. It followed naturally then that in selecting persons to act as Educational Information Consultants (EICs), the project team would turn for trainees to these established local sources.

As a result of discussions with Ministry officials, the North-eastern Region of the province consisting of 17 Boards of Education was chosen as target region from which detailed research data would be collected on the effectiveness of using Educational Information Consultants to negotiate information requests with users. This region also received preferential treatment with regard to equipment, price structure for searches, and professional development activities.

In order to compare the use of fiche between schools with and without microfiche readers, portable readers were installed in several local elementary public and separate schools. Along with these were installed "Educational Information Stations" containing sample bibliographies, fiche, journal articles, search request and order forms, and instructions for using the EISO service.

To test the level of demand for searches in relation to price charged per search and to test the effect of offering free searches as

a stimulus for further usage, a special price structure was implemented for the 17 Boards, the local Community College and the Faculty of Education, and the Regional Office of the Ministry of Education. For the boards and colleges, free searches were allotted based on the number of students enroled. The Regional Office allocation was based on the number of education officers employed. For example, with one free search per thousand students, and with a minimum of five free searches per board, the largest board with a total student population of over 13,000 students was entitled to 13 free searches. When the allotments of free searches were exhausted, the fee per search during the first two years of the project was $20, well below the $30 fee charged the rest of the province.

But the most important variable differentiating this area from the rest of the province was the provision of Educational Information Consultants.

Separate meetings with government officials, local educators, and OISE personnel were held during which the concept of an EIC was introduced and elaborated. The information consultant was pictured as an individual employed by a local agency who would be trained by the project staff to assist local educators in formulating their information problems, and supplying them with whatever further assistance was required.

Drawing upon experience, local conditions, and the relevant literature, the role of Educational Information Consultant was outlined as follows: 1) gain access to potential users (let clients know you are there and why, describe service you can offer); 2) in cooperation with clients, identify information needs; 3) help formulate problems; 4) relay request to OISE; 5) deliver and interpret bibliographies; 6) assist in

ordering complete documents; 7) follow-up and evaluation.

Each information consultant was to be responsible for a specific constituency. As a result of these preliminary meetings, it was decided that there would be three "official" EICs who would be trained by the EISO team. Two of these would have back-up people supporting them. The EICs from the Northeastern Region were the Chief Librarian of the local Community College who would be responsible for clients in his College and in the Faculty of Education that shared the same buildings; an Education Officer at the Regional Office of the Ministry of Education who would help his colleagues from the local office; the OISE faculty member attached to the local Field Centre who would have primary responsibility for the five southern boards of education in the region and secondary responsibility for the 12 northern boards. Both the government and institute EICs had colleagues available to assist clients in their absence.

Initial Training

On the understanding that the EISO search service would begin full operation in the fall, four of the possible five EICs were trained during the late summer and early in September 1975. Training took place at OISE, lasted a full day, and was paid for by the EISO project.

The general objectives of the training sessions were to familiarize the EICs with the EISO project and service and their part in them. Specifically, they were to meet the project staff; become familiar with the contents and use of ERIC products such as Resources in Education, Current Index to Journals in Education, Thesaurus of ERIC Descriptors, and the microfiche collection; gain an understanding of search processes, both

manually and automated; learn to negotiate search requests, interpret bibliographies, and order original documents in various formats. (See Appendix A for Training Session #1 for EICs).

Adjustments were made to the depth with which each of these areas was treated in accordance with the experience and backgrourd of the individual EIC. However, all underwent demonstrations and simulations of the EIC's role vis-à-vis the client and received information packages.

Although the technical aspects such as procedures for submitting requests to the analyst, ordering documents, and methods of payment were outlined in considerable detail and forms were supplied to each EIC for these purposes, other areas were treated with much less specificity. For example, the project staff purposely did not insist that the EICs follow through on the information delivery by becoming actively involved in the subsequent program changes that might result from the newly acquired information. It was felt that the variation in skills of the EICs as well as their different position militated against such a prescription. Further, it was also felt that the diversity of clients that formed the constituency of each EIC would negate any single overall follow-through scheme.

Evaluation of Initial Training Program

The goals of the training program and a brief description of the training session were outlined above. A questionnaire (see Appendix B) was designed to evaluate the degree to which those goals had been met. This was mailed to each of the three EICs in the Northeastern Region with an explanatory letter. A week after receiving this questionnaire, each

of the EICs was interviewed on site. These interviews supplemented the written responses, and gave a richer, more individualized picture of the way each EIC carried out his role and how adequately he felt his training had prepared him. They also served to highlight unforeseen problems.

The Questionnaire. Since each EIC attended a training session in the late summer or early fall, it was felt that an assessment of the training should be undertaken in the late fall, after the EICs had had some experience in their new role, but before all other training sessions had been completed so that modifications could be made in the programme. Consequently, the questionnaire was sent to the EICs in mid-November and followed up by an interview a week later. The investigators were interested in gaining information in two broad areas that might be labelled factual and intuitive (or cognitive and behavioural). The first concern was that the EIC go away from his training session with a clear understanding of the technical aspects of the project, i.e., how to place a search, how to interpret a bibliography, how to order documents, etc. These concerns were addressed by Questions 2 and 5. The second concern was to determine whether the individual trained had internalized his role as EIC, how he had done this, and to what extent. Questions 3, 7, 8, 9 and 10 address these issues in part. Expansion of these topics was followed up in the subsequent personal interviews. The remaining questions, 1, 4, 6, and 11, treated the overall conduct of the session, i.e., the length of time spent, and the effectiveness of presentation.

In general, the EICs rated the overall effectiveness of the training sessions between good and excellent. Two of the three EICs commented on the lack of time available to cover all the topics, even though

the session lasted well into the afternoon. This perceived lack of time urged the researchers to find better ways of organizing future training schedules so that EICs do not experience frustration in trying to master too much material in too short a time. Our initial plan had been to have a two day training session, but this was discarded because of practical problems: time away from their jurisdictions for educators involved, increased expenses incurred. Also, we as investigators were uncertain whether prospective EICs might be discouraged by a lengthy treatment of such "dry" subject matter. We had clearly underestimated the commitment that the EICs were willing to make! As experienced by the first EICs, the training was judged to be "too short" by all three trainees. However, all agreed that the level of treatment of the sessions was "just right"; two felt that the amount of detail conveyed was "just right" and one that more detail would have been useful. In commenting on this aspect of his training, one EIC felt that he would have benefited from working out more searches, both alone and in conjunction with the analyst. Another EIC felt hazy about how to relate Thesaurus terms to each other. Again, the investigators had underestimated the interest the EICs would have in actually constructing search strategies as distinct from helping clients to formulate their information problems in narrative form. With regard to helping the prospective EIC learn his new role, the training session ranked second in two out of three instances, after the trainee's previous experience working in the field. Next in importance in helping him to shape his role as EIC came trial and error in dealing with his clients. The problems that the EICs encountered were not directly related to the training session. These included the lack of customers, and the desire of local educators for

curriculum materials of Ontario origin.

Of all the specific informational aspects the training session attempted to convey, only the purposes and services of the EISO project were perceived as having been explained clearly. The other information components, use of ERIC indexes, formulation of search strategies, interpretation of bibliographies and ordering procedures for documents were all seen as having been explained fairly well, but below the optimum level possible. Lack of clarity and specificity were identified as limitations of the training sessions. Perhaps allowing more time as well as adding more detailed explanations would improve understanding.

Although there was a fair degree of agreement among the three EICs about the effectiveness of the training session with regard to the factual information conveyed, the types of behaviour changes that resulted in each case were different. While each prospective EIC was given the same list of objectives that he was expected to fulfill in his role as EIC, each was left to operationalize these objectives in a manner most suitable to his particular situation. Each brought his own experience, training, and personality to bear and created his own distinct orientation.

In answer to the question, "What do you see as your role as an EIC as a result of your EISO training?", the Ministry EIC responded: "Assisting the clients to select the exact descriptors which would provide the information which they wish". The Field Centre EIC answered: "The value of an EIC would lie mainly in the conceptualization of a problem area prior [his emphasis] to a search". The Community College/Faculty of Education EIC replied:

> "To give maximum assistance to the user I must be accepted as a 'confidante' and temporarily at least

> a participant in whatever project the user is undertaking. As in all reference work, the problem is to get the full story on what the client really wants and is trying to do. From that point my responsibility is to translate the problem or question to the access language of the system".

What becomes apparent here is the influence or effect the EIC's normal role has on his functioning as an EIC. The Ministry EIC, used to a traditional organizational environment, has chosen to emphasize the formalized, structured, classifactory aspects of information definition. He does not see himself initiating search requests, or following through by facilitating change. His approach is simply to select descriptors or subject headings for his clients.

The academic orientation of the Field Centre EIC is obvious immediately. He is not interested in the mechanics of strategy formulation, but in the accurate conceptualization of the problem. His emphasis is on the significance of the problem itself and creating or selecting appropriate theoretical frameworks. Interestingly enough, this EIC undertook a variety of activities, few of which were suggested by the training session, and most of which were discovered by interviewing his secretary and a student of his.

The emphasis of the third EIC reflects the concerns of public service librarians everywhere: the importance of good interpersonal relations with clients. So much of his effectiveness is a product of his acceptance as a colleague by his co-workers within the organization, that a prime focus of any role he fills will be to establish and strengthen such contacts. He recognizes that his new role derives from the reference techniques he is familiar with and he is able to adapt and modify this

expertise to what may be regarded as a new variation on an old theme: computer-based reference services. Instead of using a card catalogue, he now uses a Thesaurus and in place of Library of Congress subject headings, he uses ERIC descriptors. Only the Boolean logic is entirely new.

As a check to the question above, another query asking EICs to describe their activities as an EIC was posed. As might be expected, these activities related closely to how the individuals saw their roles. The Ministry's education officer assisted clients to select descriptors. The Field Centre representative consulted with school board personnel about searches, advised and/or directed searches of good students, and advertised the existence of the EISO service. The Community College librarian promoted the project, interacted with clients, ordered material for clients, and explained the system and materials to clients.

In further attempting to determine whether the EICs had internalized their new role, we asked where the EICs turned for their educational information needs, whether they used the EISO service in the course of their normal duties, and whether their EISO training had influenced the way they approached their normal duties. Only the Ministry EIC did not list ERIC as an educational information resource. While the other two EICs sometimes used the EISO service in their primary roles, the Ministry EIC never did. None of the three thought that the EISO training had influenced the way he approached his normal responsibilities. As we will see from data collected from the subsequent interview, this last view was not entirely corroborated, especially with regard to the Field Centre EIC.

Lastly, we come to recommendations EICs might have for changing

and/or improving their training. All stressed that more time was required. The Ministry EIC wished that more attention were given to selecting accurate descriptors while the Community College librarian wanted more detailed information on the technical aspects of interacting on-line with the data base.

The Interviews. About a week and a half after the questionnaire was distributed to the EICs, the principal investigators made an on-site visit. Among the purposes of the visit were the desire to see how the EICs were responding to their roles after their initial training, how they were ope-ationalizing their roles in their own settings, what follow-up, clarification or procedural help they might need. Each EIC was interviewed at his office for close to two hours. What emerged most strongly from these conversations were the different ways the three EICs had taken the concept of Educational Information Consultant and adapted it to fit their specific needs and positions.

The first EIC interviewed was the one located within the Regional Office of the Ministry of Education. His EISO responsibilities were limited to his 28 colleagues within the Regional Office. He was asked how things were going, what he did as an EIC, whether he had encountered any difficulties, and what suggestions or other comments he would like to make.

He described his function as mainly a passive, responsive one. That is, he felt that following a general announcement made by his Regional Director to all staff about the availability of the new service, his role was to help clients who sought him out of their own volition. When clients came to him, he usually requested that they write out in 100 words or less what their problem was. He would then choose appropriate descriptors, fill

out the EISO Search Request Form, give it to his secretary for typing and forward it to the project's search analyst at OISE. Of the five free searches that had been allotted his office, all had been used by January 1976, six months after they had been allotted. Users included one special education specialist who wished to keep his information up to date, one individual working on his doctorate, and one education officer sitting on a committee charged with the task of developing a curriculum guideline. The EIC had not solicited any of these requests, but had relied on individual motivation. When he was asked how he viewed his role as EIC, whether it was burdensome to him, his reply was: "It's part of my job. Something that has to be done."

He did venture the opinion that once the remaining free searches were used up, the $20 fee would pose a considerable barrier to using the service. He described the stringent economies prevalent in the Office and doubted whether the Office administration would authorize funds to be used for searches. The main value of the service, he felt, was for high priority committees. He did not think it was valuable for individual use. His suggestions for improving the training of EICs centred around providing them with more experience doing searches and using descriptors. He felt that formulating two searches with the analyst and then two alone that would then be evaluated by the analyst would put the EIC in a better position once he returned to the field.

On the whole, then, the interview confirmed the general information obtained from the questionnaire. The specific information that had been the focus of the training session had been learned: the EIC know the technical aspects of formulating a search and could relay received

requests to the analyst. No significant changes in behaviour, however, were immediately discernible: the EIC did not solicit clients, he had held no information sessions for his colleagues, nor had he set up any of the display materials provided. When he himself needed educational information, his first inclination was to turn to the Ministry's Resource Centre, not to the service for which he was a local representative. One might conclude then that there had been only a limited internalization of his new role.

The interview with the OISE Field Centre EIC revealed a significantly different approach. As a result of the joint meeting referred to earlier between Ministry, Field Centre, and project staff, the Field Centre had been designated responsible for searches generated in the five local southern boards of education. From our conversation with the Centre EIC, we learned that several activities had been initiated in the local boards: the Curriculum Project Co-ordinator of a local board had been recruited and trained as an EIC for his school system and two requests for searches had been submitted by his Board. An Educational Information Station had been set up at the central office of this Board as well as in the central offices of another local Board. One of the two Boards had been encouraged to participate and had borrowed a microfiche reader from the Centre. Within the Field Centre itself, different types of displays had been set up to advertise the service: on the wall at the entrance to the offices, an eye-catching assembly of posters and pictures had been erected and inside, an Information Station had been set up.

The Centre EIC viewed his major responsibility as "helping people sort out ideas". Once they had been helped to do that, he then added new

conceptual information for them to react to and incorporate into their own mental framework. He differentiated his EIC activities according to his major functions within the Field Centre. In his role as instructor of a graduate course in curriculum, he felt that his responsibilities vis-à-vis the EISO project were to help students clarify their problems, to assist them in identifying the type of material they wanted, and to have them compare their searches. His course had been structured so that only those having specific responsibilities for implementing curricula were encouraged to attend. The general topic of the course was problem solving within curriculum and each student had been assigned a search in a specific area such as reading, geography, or math, so that collectively, all the searches would represent an integrated approach to problem solving in curriculum.

In his capacity as Curriculum Facilitator, this EIC had been working with local boards helping them to arrive at goal priorities for their system. In this capacity, he would help boards conceptualize what they wanted and assist them in identifying the components of a programme. He would then urge them to submit a search for each component. His clients had not yet reached this last stage.

His third major function as Information Disseminator fitted equally well with his role as EIC. In this capacity, he was free to advertise the service as he wished, encourage the training of local EICs, use the service for his own projects.

It became clear to us from the interview that though the basic training provided by the project had been effective, these individual adaptations could not have been prescribed by project staff even if they

had been foreseen. Neither could we have hoped, within the limited amount of time allotted to training of EICs, to inculcate the variety of skills that had already made this individual a successful change agent. His previously established relations with local educators, the trust and esteem in which he was held, as well as his academic training and position all combined to ensure that he would become an imaginative, resourceful, and effective EIC. Our experience with him suggests not so much how we should alter the training of EICs as those combinations of skills and training to seek when recruiting future EICs to serve similar functions.

This is not to say, however, that only Field Centre personnel make effective EICs. The Community College/Faculty of Education EIC integrated his duties equally well though quite differently. Whereas the Field Centre EIC viewed information as a powerful tool that must be used responsibly, and took what may be termed as an ethical stance on information utilization giving guidance on when and for what purposes it was to be sought and how it was to be used, the Librarian saw himself as an impartial or neutral information purveyor. His behaviour conformed most closely to the actual training given EICs. He helped clients clarify their problem, chose appropriate descriptors, checked his choices in his library's indexes, submitted the request to the search analyst, and interpreted the bibliographies to his clients.

The Community College and Faculty of Education share one physical facility, though each institution is administered separately. The Library and its librarian, our EIC, serve the students and faculty of both organizations. During the years he had been employed at the Community College before the move to shared facilities, he had built up a loyal clientele

who naturally sought him out to help solve their information problems. When he became an EIC, he called a meeting of department chairmen within his college, explained the ERIC system, the new search service, and the availability of free searches. He was able to use as an example a sample search done for a faculty member and so stimulate immediate interest. He also demonstrated how each instructor could receive the results of a colleague's $70,000 research program for 35¢. Since his library had paper copies of the ERIC indexes, microfiche readers, as well as a reader/printer, he was able to demonstrate how the new service could augment the facilities already available.

The different orientation, aspiration, and interests of the staff at the adjacent Faculty of Education necessitated that another approach be taken there by this EIC. In this organization, he chose to work through the Dean rather than make direct approaches to clients. The Dean met with his staff and the faculty decided to give the free searches to the students. The project brochures were posted on the bulletin boards but as yet no requests had been generated.

It becomes apparent that the EIC's regular position affects to a very significant degree how the EIC will approach his task and how effectively he will carry it out. Of equal importance are his training, experience, interpersonal skills, as well as the relationships he has previously established with his colleagues. Nor are personal characteristics like intelligence, tact, persistence, enthusiasm, and imagination to be undervalued. For to carve out a new role successfully, the EIC is undoubtedly required to use each of these in good measure.

Recommendations. It is clear that once a person decides to become

an EIC for the project, he wants to learn as much as possible about the project and his role in it. It has been a mistake to underestimate the commitment of the EIC and to try to condense the training sessions into as short a space of time as possible. It has been equally wrong to try to oversimplify the complexities of automated information retrieval and the role of the EIC. It would seem that as a result of the expressed needs of the EICs, the following changes should be made in future training sessions.

1. Future EICs should be offered the option of a longer, more detailed, two day training session.

2. If the two day package is inconvenient for the EIC, his one day training should occupy a full working day.

3. Additional opportunities should be made available for the EICs to work out search strategies on their own and to have these analyzed by the search analyst.

4. Greater emphasis should be placed on the technical aspects of information retrieval--the relevant aspects of thesaurus construction, Boolean logic, etc.

5. Care must be taken to explain with greater clarity and in more detail use of ERIC indexes, formulation of search strategies, interpretation of bibliographies and ordering procedures for documents.

6. The emergent roles of the incumbent EICs could be used as examples to guide trainees in options available to them.

7. In selecting future EICs, careful consideration should be given the individual's current position, his training and experience.

As a result of the data collected from the questionnaire, interview and personal observation, certain other courses of action not specifically related to the training session suggest themselves. For example, facilitating an exchange of experiences between EICs might provide not only suggestions as to how to cope with specific problems, but also create a

greater sense of participation and integration with the project as a whole. A workshop might be held to which all EICs would be invited. They would not only interact with each other but learn about the latest developments of the service, be kept abreast of the research aspects of the project, and have a chance to compare their operation with others in the region.

It is also incumbent upon the project staff to supply more feedback to the geographically remote EICs. A monthly newsletter might serve this purpose.

The EICs also need more "public relations" types of materials, samples of service products, training manuals that they can use with their clients. The Education Information Stations should help in this regard.

Follow-up Training

By the time the first year of the EISC project drew to a close, a number of major changes in the information service took place. A new search analyst had been employed, several data bases were being searched instead of only one, and new order forms and publicity materials had been developed.

To acquaint the EICs with these changes, a second one-day training session was held on June 25, 1976. Input was solicited from the EICs regarding the substantive content, duration, and format of this session. Their unanimous response called for another one-day workshop devoted at least in part to role playing. In concurrence with their suggestions, the morning of the second training session was devoted to refining search interview techniques, strategy development, and on-line searching. The EICs exchanged client-agent roles and had their performances analyzed by

the search analyst, the investigators and their partners for the exercise. The morning ended with an explanation of the data bases that had been added to the service since its inception. (See Appendix C for Agenda).

The afternoon saw the introduction and explication of the new EISO brochure and guide, search request and order forms, user evaluation questionnaire, and service evaluation data sheet. Building on the preliminary differentiation of EIC roles that had been observed during the first year, the investigators recapitulated the project's aims and goals for the agents and went on to present theoretical material on the possible types of linkage roles and the complexities of implementing change. The day ended with a group discussion during which EICs compared techniques and roles and brain-stormed about ways of improving their effectiveness.

By winter 1977, it became clear that many of the initial role characteristics that the researcher had observed earlier had been amplified and expanded. But that is a subject for another time!

Bibliography

Baldridge, Victor J., and Deal, Terrence E. (Eds.). Managing Change in Educational Organizations. Berkeley, Ca.: McCutchan, 1975.

Banathy, Bela H., Rosenoff, Wayne E., Aldritch, Charles L., McCutchan, Nancy A., and Schmitz, Monica L. The Educational Information Consultant. Final Report. Berkeley, Ca.: Far West Laboratory for Educational Research and Development, 1972. (ED 071 689).

Bennis, Warren G., Benne, Kenneth D., Chin, Robert, and Corey, Kenneth E. (Eds.). The Planning of Change. (3rd ed.). Toronto: Holt, Rinehart, and Winston, 1976.

Carlson, Richard O. Adoption of Educational Innovations. Eugene, Ore.: University of Oregon, Center for the Advanced Study of Educational Administration, 1967.

Educational Information Consultant: Skills in Disseminating Educational Information. A Project Report. Berkeley, Ca.: Far West Laboratory for Educational Research and Development, 1971.

Farr, Richard. Knowledge Linkers and the Flow of Educational Information. An Occasional Paper for ERIC at Stanford. Stanford, Ca.: Stanford University, ERIC Clearinghouse on Educational Media and Technology, 1969.

Fullan, Michael. Overview of the Innovative Process and the User. Interchange, 1972, 3(2-3), 1-46.

Gross, Neal, Giacquinta, Joseph B., and Bernstein, Marilyn. Implementing Organizational Innovations. New York: Basic Books, 1971.

Havelock, Ronald G. Planning for Innovation through Dissemination and Utilization of Knowledge. Ann Arbor, Mich.: Center for Research on Utilization of Scientific Knowledge, 1973.

Havelock, Ronald G., and Havelock, Mary C. Training for Change Agents. Ann Arbor, Mich.: Center for Research on Utilization of Scientific Knowledge, 1973.

Hood, Paul D. Dissemination, Distribution and Utilization of Laboratory Products. In J.K. Hemphill and F.S. Rosenau (Eds.), Educational Development: A New Discipline for Self-Renewal. Eugene, Ore.: University of Oregon, Center for Advanced Study of Educational Administration, 1973.

House, Ernest R. The Politics of Educational Innovation. Berkeley, Ca.: McCutchan, 1974.

Maguire, Louis M., et al. An Annotated Bibliography on Administering for Change. Philadelphia, Penn.: Research for Better Schools, Inc., 1971.

Mick, Colin, et al. Development of Training Resources for Educational Extension Services Personnel (3 vols.). Stanford, Ca.: Stanford University, Institute for Communication Research, and Santa Monica, Ca.: System Development Corporation, 1973. (ED 077 534 - ED 077 556).

Miles, Matthew B. (Ed.). Innovation in Education. New York: Teachers College Press, 1964.

Mort, Paul R., and Cornell, Francis G. Adaptability of Public School Systems. New York: Teachers College, Press, 1938.

Nash, Nicholas, and Culbertson, Jack. (Eds.). Linking Processes in Educational Improvement. Columbus, Ohio: University Council for Educational Administration, 1977.

Piele, Philip K. Review and Analysis of the Role Activities, and Training of Educational Linking Agents. Eugene, Ore.: ERIC Clearinghouse on Educational Management, 1975.

Rogers, Everett M., and Shoemaker, F. Floyd. Communication of Innovations: A Cross-Cultural Approach. (2nd ed.). New York: Free Press, 1971.

Sieber, Sam D., Louis, Karen Seashore, and Metzger, Loya. The Uses of Educational Knowledge (2 vols.). New York: Columbia University, Bureau of Applied Social Research, 1972.

Smith, Louis, and Keith, Pat M. Anatomy of Educational Innovation. Toronto: Wiley, 1971.

Zaltman, Gerald, and Duncan, Robert. Strategies for Planned Change. Toronto: Wiley, 1977.

EDUCATIONAL INFORMATION SYSTEM FOR ONTARIO

TRAINING SESSION #1 FOR EICs

TIME	ACTIVITY	OBJECTIVES	MATERIALS	RESOURCE PERSONS
9:00	Meet at Airport	Transport to OISE	Car	SL
9:30-10:00	OISE and Library Tour	Familiarity with functions, layout, people. Relationship of project to Library.	OISE Bulletin, Library Guide, R & D Studies, Annual Report.	EA, SL
10:00-10:20	Review of Project	Aims and scope or project. Reporting network in Region 3.	Diagram of reporting network. List of project staff. Contract copy.	EA, SL
10:20-11:00	Introduction to searching (Manual)	Familiarity with contents and how to use RIE, CIJE, Thesaurus, journals, microfiche	RIE, CIJE, fiche, Thesaurus, journals, microfiche.	EA
11:00-11:15	Coffee			
11:15-12:30	Client approach and EIC role vis-à-vis client. EIC role vis-à-vis search analyst. Search analyst support function.	Knowledge regarding client approaches. Knowledge regarding EIC response.	EIC role description, Chart showing approaches Search Form (sample).	SL, FR
12:30-2:00	Lunch			

TIME	ACTIVITY	OBJECTIVES	MATERIALS	RESOURCE PERSONS
2:00-3:00	Negotiation of requests.	a) Understand searching b) Understand Boolean Logic. c) Search strategy using thesaurus. d) Ability to negotiate requests and translate into machine-readable format.	a) SDC Materials b) Thesaurus	ER
3:00-3:30	Manual Search	Independent ability to do manual search.	Thesaurus, CIJE, RIE.	ER
3:30-4:00	Review and evaluation of manual search.	Independent ability to do manual search.		
4:00-5:00	Computer search.	Familiarity with search methods and output.	a) Terminal b) Bibliography	ER
5:00-5:15	Ordering documents.	Ability to obtain original documents, journals, fiche copies.	Order forms.	
5:15-5:30	Wrap-up questions.			EA, ER, SL

Appendix B

Educational Information System for Ontario

The Ontario Institute for Studies in Education
252 Bloor Street West, Room N754
Toronto, Ontario M5S 1V6

Evaluation of Training Session for Educational Information Consultants

1. In general, how would you rate the adequacy of the training session you underwent to become an Educational Information Consultant (EIC) for the Educational Information System for Ontario (EISO) project?

_____Excellent _____Good _____Poor

Comments:

2. Overall, what was the practical value to you of the information or assistance that you received from EISO staff during your training session?

	Information (forms, samples)	Personal assistance (EISO staff)
Very useful	_____	_____
Moderately useful	_____	_____
Only slightly useful	_____	_____
Not useful	_____	_____

Comments:

3. What do you see as your role as an EIC as a result of your EISO training?

4. Please give your opinion of the following statements regarding your EISO training session.

Length of training session:

_____ too long _____ too short _____ just right

Amount of detail or specificity conveyed:

_____ too much _____ too little _____ just right

Level of treatment of sessions provided related to your needs:

_____ too complex _____ too simple _____ just right

Comments:

5. Please rate the training session with regard to the following items.

	Excellent	Good	Poor
Explained clearly the purposes and services of the EISO project			
Defined well what EIC role involved			
Taught me to use ERIC indexes and Thesaurus			
Explained how to formulate search strategies for manual and automated retrieval			
Taught me how to read and interpret a computer-generated bibliography			
Taught me procedures for ordering microfiche and paper copies of original documents			

Comments:

6. How would you rank the following influences in helping you to learn how to be an EIC? (Place the number "1" for most important, "2" for next in importance, etc.).

_____ trial and error in dealing with client

_____ advice from client

_____ the EISO training program and staff

_____ my own previous experience working in the field

_____ literature I have read on the role of change agents or knowledge dissemination and utilization

_____ discussion of my role with other EICs

_____ advice or help from other colleagues (Please specify name and position) _____

_____

_____

_____ other (Please specify) _____

_____

_____

Comments:

7. How often do you use the EISO service in the course of your normal duties?

_____ Frequently _____ Sometimes _____ Never

8. Has your EISO training influenced the way you approach your normal duties?

_____ Yes _____ No

If Yes, please specify:

9. What activities do you engage in as an EIC?

10. Which sources do you turn to most often when you require educational information?

11. What problems are you encountering in your role as EIC for which your EISO training did not prepare you?

12. In what ways would you recommend that the training of EICs by EISO staff be changed or improved?

Please use the remaining space for any additional comments you would like to make.

Please return your completed questionnaire in the envelope provided to:

Mrs. Ethel Auster
Department of Educational Administration, N754
Ontario Institute for Studies in Education
252 Bloor Street West
Toronto, Ontario
M5S 1V6

THANK YOU VERY MUCH

Appendix C

Training Session #2 for EICs
June 25, 1976
9:30 AM-4:30 PM

AGENDA

Time	Activity
9:30-9:45	Search interview (Simulated pairs)
9:45-10:30	Strategy development
10:30-10:45	Coffee break
10:45-11:30	On-line searching
11:30-11:45	Analysis and critique
11:45-12:15	Availability of other data bases
12:30-1:45	Lunch
2:00-2:20	Introduction of new EISO materials
2:20-3:00	Aims and goals for EIC's
3:00-3:15	Types of Linkage Agents
3:15-4:00	Group discussion of different roles and increasing effectiveness
4:00-4:30	Summing up